

Remarks of  
T. Keith Glennan at  
"Echo" Stamp Ceremony  
Dec.15,1960

One of the most rewarding moments for many of us at NASA came in the early morning hours of last August 12 when Echo I was placed in orbit a thousand miles above the earth.

This giant, 100-foot sphere, brilliant as a bright star, has fired the imagination of millions throughout the world. Observers everywhere marvelled at the tissue-thin structure traveling through space at more than 16,000 miles per hour. Echo I has indeed been a sensational public spectacle. But more important, the satellite has been a valuable scientific tool -- a step in the development of practical, useful communications satellites.

Echo I is a passive reflector satellite, which means that it provides a surface in space for bouncing a signal from one place on earth

to another, above the atmosphere. The satellite already has demonstrated that such a device will be extremely useful for radio transmission when electronic disturbances in the ionosphere make direct point-to-point transmission impossible.

NASA will continue development of the passive reflector satellite but, in addition, is programming an early demonstration of the technical feasibility of light-weight active-repeater satellites.

The active repeater satellite differs from the passive satellite in that it is equipped with receivers and transmitters.

In this endeavor NASA will explore, with the cooperation of American industry, the main technological approaches and progress to support promising private proposals on a cost-reimbursable basis, making available launch vehicles and sites, tracking facilities and technical assistance.

NASA will continue its efforts in this field long enough to ensure private development of a commercially feasible system.

We must realize, however, that a system of communications satellites will not be developed overnight. There are many problems to be solved. Hardware must be perfected, international agreements worked out and frequencies allocated.

These things will take time, but I am confident that by the efforts of this Nation and other forward-looking countries a system of communications satellites will be established within a few years that will benefit mankind everywhere on earth.